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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/822,101

04/08/2004

Agostino Tucciarone

AT-11

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ARTHROCARE CORPORATION
7500 Rialto Boulevard
Building Two, Suite 100
Austin, TX 78735-8532

EXAMINER

HOFFMAN, MARY C

ART UNIT

PAPER NUMBER

3733

NOTIFICATION DATE

DELIVERY MODE

01/10/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

intel_prop@arthrocare.com

Office Action Summary

Application No.

10/822,101

Applicant(s)

TUCCIARONE ET AL.

Examiner

Mary Hoffman

Art Unit

3733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-18 and 21-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-18 and 21-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/22/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

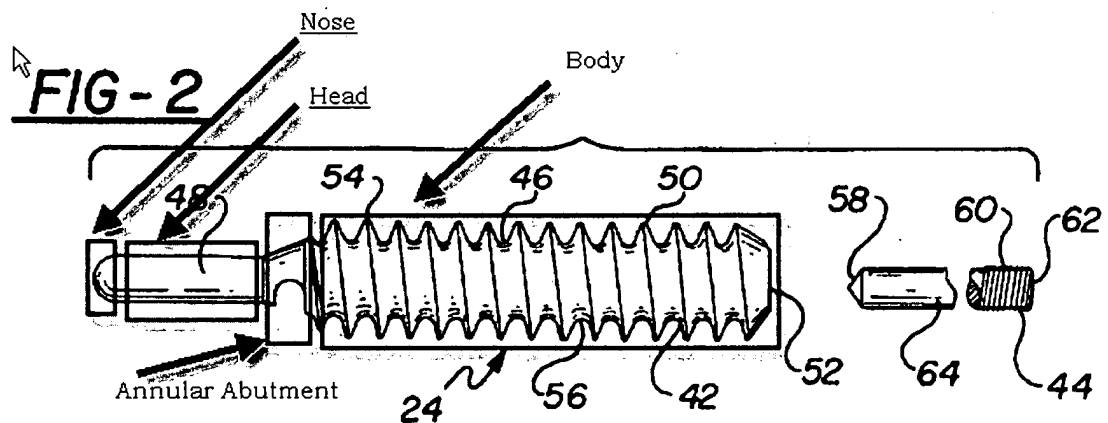
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (U.S. Patent No. 5,674,224) in view of Chervitz et al. (U.S. Patent No. 6,499,486).

Howell et al. disclose a method of ACL graft ligament fixation comprising the steps of providing a transverse suspension device comprising a proximal body section defining a longitudinal axis, a head section extending along the longitudinal axis and protruding distally from the body section, the head section having a smaller diameter than that of the body section, and an annular abutment surface disposed between the head section and the body section wherein the abutment surface is substantially at an angle to the longitudinal axis (FIGS. 2-3); forming a femoral tunnel and forming a transverse tunnel intersecting the femoral tunnel (FIG. 10); and the head section contacts a recess formed in an opposite wall of the femoral tunnel wherein the abutment surface urges the graft against the opposite wall (FIG. 14). A guidewire is advanced under observation with a viewing device, specifically an arthroscope (col. 6, lines 37-53). The recess is formed with a dilator tool (ref. #124). The transverse suspension

device is cannulated. The transverse tunnel is drilled to intersect and not cross the femoral tunnel. The body section comprises external threads. The device includes a nose section distal to and distinct from the head section and having a reduced diameter as compared to the head section, the nose section extending along the longitudinal axis, and an annular abutment surface distinct from the head section and disposed between the head section (see marked up figure below). The head section has a substantially constant diameter.



Howell et al. disclose the claimed invention except for locating a graft loop in the femoral tunnel in such a manner that an open face of the loop faces an intersection where the femoral tunnel intersects the transverse tunnel and passing at least a part of the head section of the transverse suspension device through the graft loop via the transverse tunnel, the nose section being frustoconically shaped, and the abutment surface having an angle of about 90 degrees.

Chervitz et al. disclose the step of locating a graft loop in the femoral tunnel in such a manner that an open face of the loop faces an intersection where the femoral tunnel intersects the transverse tunnel and then passing at least a part of the head section of the transverse suspension device through the graft loop via the transverse tunnel as one of the numerous ways in which a graft may be positioned in the tunnel and secured (col. 1, lines 49-50).

It would have further been an obvious to one of ordinary skill in the art at the time the invention was made to perform the method of Howell et al. with the step of locating a graft loop in the femoral tunnel in such a manner that an open face of the loop faces an intersection where the femoral tunnel intersects the transverse tunnel and then passing at least a part of the head section of the transverse suspension device through the graft loop via the transverse tunnel in view of Chervitz et al. as one of the numerous ways in which a graft may be positioned in the tunnel and secured. It would have further been an obvious matter of design choice to one skilled in the art at the time the invention was made to perform the method of Howell et al. in view of Chervitz et al. with the head section being frustoconical shaped, since applicant has not disclosed that such solve any stated problem or is anything more than one of numerous shapes or configurations a person ordinary skill in the art would find obvious for the purpose of providing a head section or ligament holding nose of a transverse suspension device. *In re Dailey and Eilers*, 149 USPQ 47 (1966). It would have further been obvious to one having ordinary skill in the art at the time the invention was made to perform the method of Howell et al. in view of Chervitz with a device having an angle of about 90 degrees,

since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chervitz et al. (U.S. Patent No. 6,499,486) in view of Clark et al. (U.S. Patent 6,306,138).

Chervitz et al. disclose a method of ACL graft ligament fixation comprising the steps of forming a passing pin tunnel in a femur (FIG. 10), the passing pin tunnel having a longitudinal axis and exiting a superior wall of the femur; forming a femoral tunnel along the longitudinal axis, the femoral tunnel having a larger diameter than the passing pin tunnel and terminating in the femur; forming a transverse tunnel intersecting the femoral tunnel; locating a graft loop (ref. #25) in the femoral tunnel in such a manner that an open face of the loop faces an intersection where the femoral tunnel intersects the transverse tunnel, and wherein the locating comprises pulling on sutures (ref. #100) holding the graft loop to locate the graft loop, and the pulling on sutures comprises pulling on the sutures through the passing pin tunnel; passing at least a part of a head section of a transverse suspension device (see FIG. 4) through the graft loop via the transverse tunnel until the head contacts an opposite wall of the femoral tunnel. After location of the graft loop in the femoral tunnel, a guide wire is advanced thereunder from the transverse tunnel (FIG. 11). The suspension device is passed along the guide wire after the guide wire is advanced under the graft loop. The head of the device is advanced as far as a distal head of a recess (channel opposite to transverse channel)

formed in the opposite wall of the femoral tunnel. The graft is urged against the opposite wall as the head is advanced into the recess.

Chervitz et al. disclose the claimed method except for the transverse tunnel terminating within the femur; rather Chervitz shows a tunnel that accommodates a flexible guide wire.

Clark et al. disclose a traditional guide wire, ref. #18, which does not require the transverse tunnel to exit the femur, thus, Clark et al. disclose the transverse tunnel terminating within the femur (FIG. 13) for delivering the guide wire and cross pin under the graft loop.

It would have further been an obvious to one of ordinary skill in the art at the time the invention was made to perform the method of Chervitz et al. with the transverse tunnel terminating within the femur in view of Clark et al. for delivering the guide wire and cross pin under the graft loop.

Response to Arguments

Applicant's arguments filed 10/22/2007 with respect to claims 15-19 rejected under Chervitz et al. (U.S. Patent No. 6,499,486) in view of Clark et al. (U.S. Patent 6,306,138) have been considered but are not persuasive. Applicant argues that Chervitz et al. reference does not show a graft being urged against the opposite wall of the tibial tunnel. The examiner respectfully disagrees. As the transverse screw device (ref. #60) is inserted through the graft loop, there will be inherent friction that will cause the graft to

move slightly with the screw device as it is inserted transversely. In this way, the graft will be urged against the tibial wall.

Applicant's arguments with respect to the claims rejected under 35 U.S.C. 102(e) as being anticipated by Howell et al. (U.S. Patent No. 5,674,224) have been considered but are moot in view of the new ground(s) of rejection [i.e. the claims are currently rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (U.S. Patent No. 5,674,224) in view of Chervitz et al. (U.S. Patent No. 6,499,486)]. It is noted that in the Remarks filed 10/22/2007 on page 8, lines 21-22, Applicant argues that the graft is held in place by fastener ref. #12; however, ref. #12 of the Howell et al. patent is used to label the femur bone, not to label a fastener. In any case, the graft can be considered "fixed" in the bone tunnel by the transverse screw device since the screw device holds the graft securely in the tunnel and prohibits the graft from being pulled out.

The rejections are deemed proper.

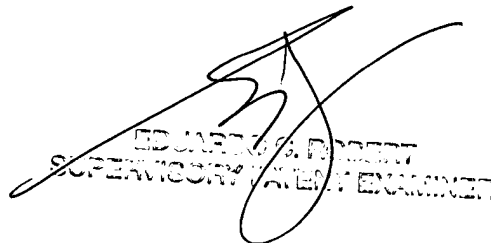
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Hoffman whose telephone number is 571-272-5566. The examiner can normally be reached on Monday-Friday 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo C. Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCH



EDUARDO A. ROBERT
SUPERVISORY PATENT EXAMINER